DECISION MEMO
Deer Valley Meadow Enhancement Project

USDA Forest Service
Mendocino National Forest, Upper Lake Ranger District
Lake County, California

I. Introduction

Several check dams are located along an unnamed tributary to Rock Creek within Deer Valley. Three are located in the meadow portion while at least five more are located upstream of the meadow. These structures were installed in the late 1980's and early 1990's to stop lateral (streambank) and vertical erosion within the channel. The proposed project area lies within the French Creek- Rice Fork watershed.

These structures are starting to outlive their intended purpose. When the check dams fill up with sediment, the result is a decrease in channel slope. Consequently, this will cause water to push around the edges of the check dam and cause failure (see figure 1). Plots have been placed since 2014 in the meadow to measure streambank erosion in the check-dam area. Results show approximately 3 cubic yards of stream bank erosion from the area (~65 feet of stream length) every year.

Plant community composition and structure in meadows are often dramatically different than in the surrounding forests, and these meadows provide important habitat for wildlife, as well as aesthetics and biological diversity. A meadow opening, for example, will generate four to five times the herbaceous production and plant richness of the nearby forest interior (Moore and Deiter, 1992; Brown, 1994). Tree encroachment can be seen over a series of aerial photos, and is especially true around the headcut and channel. Western pond turtles have been seen during the 2017 field season.

During the 2018 Ranch Fire, approximately 75% of the fence perimeter was damaged or burned. The meadow itself however, only burned lightly around the outer edges

The project area is located north of the community of Upper Lake, California, within T16N, R9E, MDBM (see map). The meadow falls within the French Creek- Rice Fork (HUC 12, 180101030101)

II. Purpose and Need

Existing Conditions

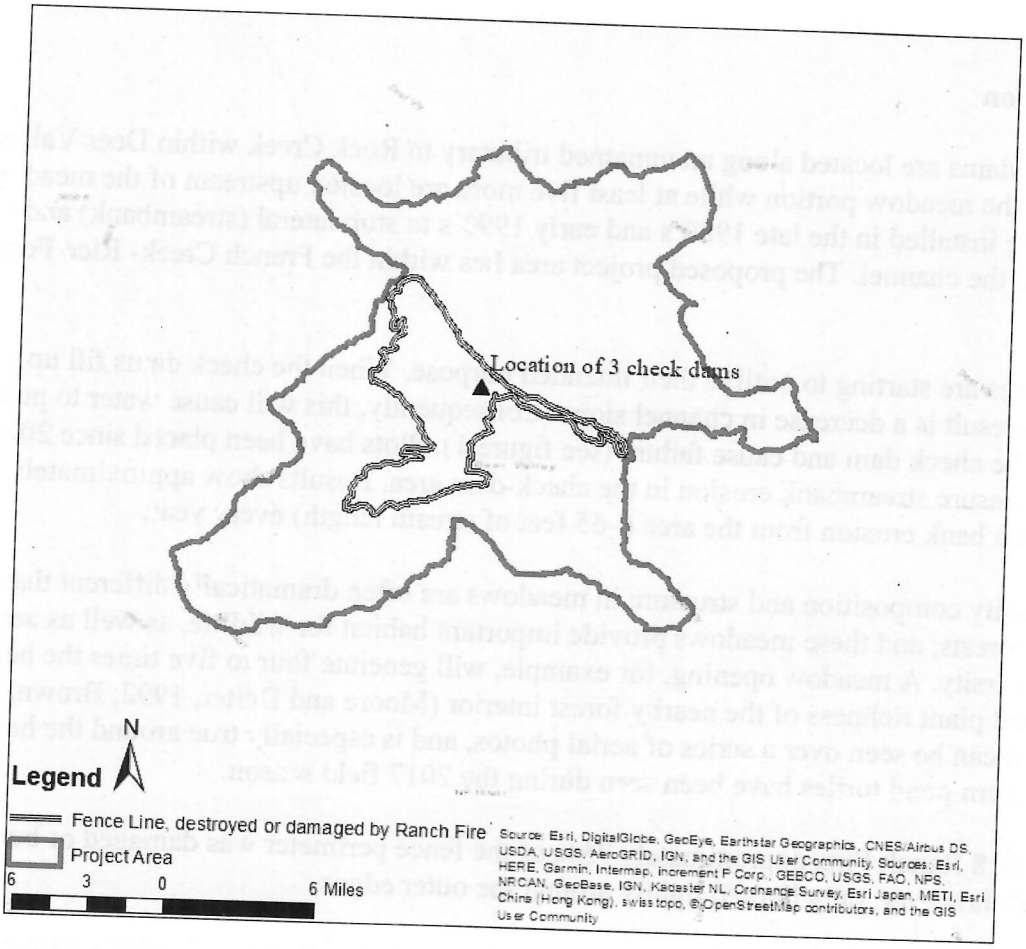
Check dams located within the meadow of Deer Valley are failing. As a result, accelerated erosion is happening around the check dams and is likely causing the meadow to dewater. With less water retained in the meadow, conifer encroachment is happening around the edges and even within the meadow. During the 2018 Ranch Fire, the buck-and-rail fence around the meadow was heavily damaged. This fence primarily keeps Off Highway Vehicle (OHV) recreationalists out the meadow. It also keeps cattle from impacting the sensitive stream banks.

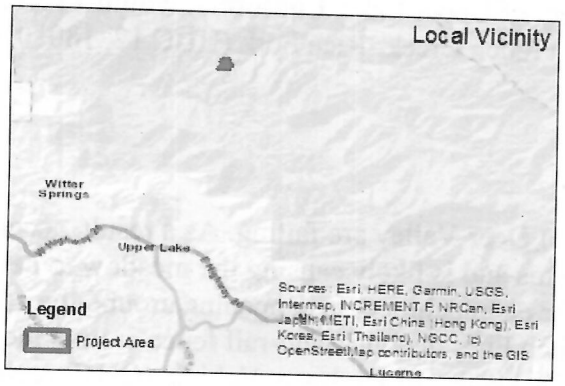
Desired Conditions

The purpose of the project is to improve water quality and improve wildlife habitat.

III. Project Location

The project area is located north of the community of Upper Lake, California, within T16N, R9W, MDBM (see map).





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T16N, R9W, Sec 4&5 MDB&M

USDA

IV. Decision to be Implemented

I have decided to implement the Deer Valley Meadow Enhancement Project. This project consists of removing check dams within the meadow and replacing them with structures that do not impede flow. Encroaching conifers will be cut down. This material will either be left on site or carried out to be piled and burned outside of the meadow. The fence will be rebuilt or repaired to protect sensitive areas.

Design features will be utilized for resource protection. Resource design features can be found in Appendix A.

V. Proposed Action

1) Excavate (by hand) the failing check dams and place them in such a manner that they act as "Vanes." A vane is a structure that is oriented in an effective upstream angle and slope in the streambed which deflects flows away from the bank toward the center of the channel. Effective placement of a vane structure demonstrates the principle that a fluid will tend to cross a resistant, uniform structure at a perpendicular angle. Combining the proper slope with the proper angle strongly accentuates that tendency while simultaneously preventing the diversion of high velocity flows into the streambank. Even more importantly, unlike check dams, this function is not altered as flow increases.

Alternatively, Beaver Damn Analogues (BDA) may be constructed to help attenuate water and fine sediment. These structures are primarily made of willows and serve to reconnect the stream with its floodplain in order to increase the frequency that streamflows overtop banks, re-water the floodplain, and dissipate stream energy. However, in the absence of beavers, these structures would require maintenance.

2) The fence will be repaired and replaced in sections to prevent cattle from causing damage to streambanks and discourage OHV users from driving onto the meadow. The fence perimeter is approximately 0.7 miles, 0.52 of which is damaged or burnt. Fence design is "buck and rail," which does not require any ground disturbance.

3) Young conifers may also be cut in and around the edges of the meadow to mitigate encroachment while planting willows on the banks for further stabilization.

4) Light burning of the meadow and surrounding area (about 75 acres) would also be beneficial to the meadow by improving plant vigor.

Structure work would be implemented during low flow season (late summer/ early fall) while tree falling could be done throughout the year, weather dependent. Meadow burning would be completed ideally in early spring. Project size would be limited to approximately 75 acres.

VI. Management Area and Direction

The proposed project is located in Management Area 21- Blue Slides. This project meets management direction by rehabilitating meadows and glades for deer fawning and forage. The rebuilding of the fence will manage livestock to protect glades and meadows from overutilization.

The purpose of this project meets standards and guidelines of the Mendocino's LRMP (Range #1, LRMP IV-28): Design and construct range fencing to allow for safe passage of big game. Consider big game use and movement patterns in order to minimize impacts on water, food, cover, seasonal ranges, key meadows, and openings.

Aquatic Conservation Strategies (LRMP IV-31) under Mendocino's LRMP met include:
g) Maintain and restore the timing, and duration of floodplain inundation and water table elevation in meadows and wetlands.

h) Maintain and restore the species composition and structural diversity of plant communities in riparian areas and wetlands to provide adequate summer and winter thermal regulation, nutrient filtering, appropriate rates of surface erosion, bank erosion, and channel migration and to supply amounts and distributions of coarse woody debris sufficient to sustain physical complexity and stability.

i) Maintain and restore habitat to support well-distributed populations of native plant, invertebrate, and vertebrate riparian-dependent species.

Reasons for Categorically Excluding the Decision

Agency policy at 36 CFR §220.6(a) states, "A proposed action may be categorically excluded from further analysis and documentation in an environmental impact statement (EIS) or environmental assessment (EA) only if there are no extraordinary circumstances related to the proposed action and if: the proposed action is within one of the categories established by the Secretary at 7 CFR part 1b.3 or the proposed action is listed in 36 CFR §220.6(d) and (e)".

A. Category of Exclusion:

My Decision falls under Categories of Actions for Which a Project or Case File and Decision Memo are Required. The following categories apply to this project: Forest Service Handbook (FSH) 1909.15, Chapter 30.15;

36 CFR 220.6 (e)(17) *"Restoring wetlands, streams, riparian areas or other water bodies by removing, replacing, or modifying water control structures such as, but not limited to, dams, levees, dikes, ditches, culverts, pipes, drainage tiles, gates, and fencing, to allow waters to flow into natural channels and floodplains and restore natural flow regimes to the extent practicable where valid existing rights or special use authorizations are not unilaterally altered or canceled." and*

36 CFR 220.6 (e)(6) *"Timber stand and/or wildlife habitat improvement activities that do not include the use of herbicides or do not require more than 1 mile of low standard road construction."*

A snynopsis of resource analysis and consequences follows, for resource condition that are determined to be present or not, as associated with my decision.

1. **Federally listed threatened or endangered species or designated critical habitat, species proposed for Federal listing or proposed critical habitat, or Forest Service sensitive species-**
   Potential effects of the proposed action on wildife, fish, and rare plant species were analysed in various documents. It was determined that effects would be discountable or insignificant to federally listed species or designated critical habitat.

2. **Flood plains, wetlands and municipal watersheds:**
   There will be no negative effects to wetlands or floodplains. There are no watersheds used for municipal withdrawl purposes in the project area.

3. **Congressionally designated areas, such as wilderness, wilderness study areas, or national recreation areas:**
   The project is not located within congressionally designated Wilderness Areas or Wild and Scenic Rivers. Additional analysis was documented on the Berryessa Snow Mountain National Monument Interdisciplinary Team Analysis Checklist.

4. **Inventoried roadless areas or potential wilderness areas:**
   This project is not located within any inventoried roadless areas.

5. **Research natural areas:**
This project is not located within any Research natural areas.

6. **American Indians and Alaska Native religious or cultural sites:**
There are no known religious or cultural sites located in the project area. If new archaeological remains are located during project implementation, project activities will halt until the district archaeologist can assess the situation.

7. **Archaeological sites, or historic properties or areas:**
Cultureal resources identified within the project area will be protected according to standards set forth by the District Archaeologist. Any potential negitive effects would be mitigated.

"The mere presence of one or more of these 7 resource conditions does not preclude use of a categorical exclusion (CE). It is the existence of a cause-effect relationship between a proposed action and the potential effect on these resource conditions and if such a relationship exists, the degree of the potential effect of a proposed action on these resource conditions that determine whether extraordinary circumstances exist. (36 CFR 220.6(b))."

B. Other Resource Considerations

1. Invasive Species:

Invasive plant species were found within the project area, including cut-leaved blackberry, bull thistle, and medusahead. Since most of the proposed work for this project will be completed by hand (including replacing check dams, felling trees, and repairing and replacing fences), ground disturbance should be minimal. The low levels of proposed ground disturbance indicate a **low risk** for the spread of existing infestations of invasive species, provided that all persons implementing this project follow cleaning guidelines for equipment, vehicles, boots, etc (Botany Analysis, 2019).

2. Survey and Manage (S&M) species:

There are no known locations for any Threatened, Endangered, Forest Service Sensitive, or Survey and Manage plant species within the proposed project area and no suitable habitat for any of them was observed in the proposed project area. Implementing the project would have no effect on any Threatened, Endangered, or Forest Service Sensitive plant species (Botany Analysis, 2019).

My conclusion is based on a review of the record that shows thorough consideration of the proposal using best available science. I find this categorical exclusion is appropriate in this situation, because there are no extraordinary circumstances that may significantly affect the environment, based on expert resource review conducted by the US Forest Service. Therefore, I find that the Deer Valley Meadow Enhancement Project will result in no extraordinary circumstances.

VII. Public Involvement

Scoping

A scoping letter was emailed or mailed to the 16 identified stakeholders (including permittees, tribes, other agencies, and several other persons of interest). A news release was published on August 26th, 2019 for the general public. Only a few clarifying questions were received, but no comments.

VIII. Findings Required by Other Laws

I have determined that this action will comply with all applicable laws and regulations. Summarized below are the pertinent laws and regulations.

National Forest Management Act (NFMA) and Forest Plan Consistency:
This decision is consistent with the Land and Resource Management Plan (LRMP) as required by NFMA. The purpose of this project meets standards and guidelines of the Mendocino's LRMP (Range #1, LRMP IV-28; Riparian & Aquatic Ecosystems #1, LRMP IV-30).

Endangered Species Act:
There will be no effect on any threatened or endangered species and thereby complies with the Endangered Species Act of 1973 (2019 Wildlife, Fisheries and Botany Analysis).

Sensitive Species (Forest Service Manual 2670):
There will be no loss of species viability or significant trends toward federal listing (2019 Wildlife, Fisheries, and Botany Analysis).

Clean Water Act, wetlands (Executive Order 11990) and floodplains (Executive Order 11988):
This project not negatively affect floodplains or municipal watersheds. (Hydrology Analysis, 2019).

National Historic Preservation Act (NHPA):
Compliance with this law can be found in the above section VI: A6 A7 as well as the Archaeology Analysis (2020).

National Environmental Policy Act (NEPA):
This Act requires public involvement and consideration of potential environmental effects. The entirety of this documentation for this decision supports compliance with this Act.

IX. Implementation Date

Implementation of the project is expected to begin in the spring of 2020.

Administrative Review

My decision is not subject to appeal. On January 17, 2014, the President signed into law the Consolidated Appropriations Act of 2014 (Pub. L. No. 113-76). Section 431 of that Act directs that the 1992 and 2012 legislation establishing the 36 CFR 215 (post-decisional appeals) and 36 CFR 218 (pre-decisional objections) processes "shall not apply to any project or activity implementing a land and resource management plan … that is categorically excluded ….under the National Environmental Policy Act [NEPA]." On February 7, 2014, the President signed into law the Agricultural Act of 2014 (Farm Bill) (Pub. L. No. 113-79). Section 8006 of the 2014 Farm Bill repealed the Appeals Reform Act (ARA) (Pub. L. No. 102-381). The ARA's implementing regulation was 36 CFR 215. The 2014 Farm Bill also directs that the pre-decisional objection process established in the Consolidated Appropriation Act of 2012 shall not be applicable to categorically excluded projects or activities. As a result of these two statutes, the Forest Service will no longer offer notice, comment and appeal opportunities pursuant to 36 CFR 215 for categorically excluded projects.

I. Contact Person

For further information contact: Frank Aebly, Mendocino National Forest, Upper Lake Ranger District, 10025 Elk Mountain Road, Upper Lake, CA 95485 707-275-1401.

Frank A. Aebly
District Ranger

3/2/20
Date

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Appendix A- Design Features

Hydrology- The following National Best Management Practices (BMP's) should be followed to ensure resource protection:

AqEco-2. Operations in Aquatic Ecosystems
Objective: Avoid, minimize, or mitigate adverse impacts to water quality when working in aquatic ecosystems.
Practices:

- Minimize heavy equipment entry into or crossing water.
- Conduct operations during dry periods
- Promptly install and appropriately maintain erosion control measures.
- Promptly rehabilitate or stabilize disturbed areas as needed following construction or maintenance activities.

AqEco-4. Stream Channels and Shoreline
Objective: Design and implement stream channel and lake shoreline projects in a manner that increases the potential for success in meeting project objectives and avoids, minimizes, or mitigates adverse effects to soil, water quality, and riparian resources.
Practices:

- Incorporate grade control measures into project design as needed.
- Use suitable measures to avoid or minimize water forces undermining the toe of the structure.
- Tie structures into stable anchorage points, such as bridge abutments, rock outcrops, or well-vegetated stable sections, to avoid or minimize erosion around the ends.
- Choose vegetation appropriate to the site to provide streambank stabilization and protection adequate to achieve project objectives.

Fire-2. Use of Prescribed Fire
Objective: Avoid, minimize, or mitigate adverse effects of prescribed fire and associated activities on soil, water quality, and riparian resources that may result from excessive soil disturbance as well as inputs of ash, sediment, nutrients, and debris.
Practices:

- Keep staging areas as small as possible while allowing for safe and efficient operations.
- Store fuel for ignition devices in areas away from surface water bodies and wetlands.
- Collect and properly dispose of trash and other solid waste.
- Locate and construct fireline in a manner that minimizes erosion and runoff from directly entering waterbodies by considering site slope, soil conditions, and using and maintaining suitable water and erosion control measures.
- Avoid building firelines in or around riparian areas, wetlands, marshes, bogs, fens, or other sensitive water-dependent sites unless needed to protect life, property, or wetlands.
- Rehabilitate or otherwise stabilize fireline in areas that pose a risk to water quality.
- Pile and burn only the slash that is necessary to be disposed of to achieve treatment objectives.
- Avoid piling and burning for slash removal in Riparian Reserves to the extent practical.
- Locate slash piles in areas where the potential for soil effects is lessened (meadows, rock outcrops, etc) and that do not interfere with natural drainage patterns.
- Avoid burning when conditions will cause the fire to burn too hot and damage soil conditions.

Botany- All equipment shall be thoroughly cleaned before and after to minimize the spread of invasive weeds. Avoid staging equipment in weedy areas.

Archaeology- If new archaeological resources are located during project implementation, project activities will halt until the district archaeologist can assess the situation.